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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,298	06/05/2001	Joseph P. Steiner	06843.0038	6727

22852 7590 04/16/2004

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

KIM, VICKIE Y

ART UNIT	PAPER NUMBER
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1614

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DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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09/873,298

6/5/2001

Steiner et al

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EXAMINER

Vickie Kim

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Commissioner of Patents and Trademarks

1. All claims are allowable. However, due to a potential interference, ex parte prosecution is SUSPENDED FOR A PERIOD OF 6 MONTHS from the date of this letter. Upon expiration of the period of suspension, applicant should make an inquiry as to the status of the application.

VICKIE KIM
PRIMARY EXAMINER

Art Unit 1614

BRUCE KISLUK, DIRECTOR
TECHNOLOGY CENTER 1600

Art Unit: 1614

EXAMINER'S AMENDMENT

#25/F 10
4/6/04

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Strauss, William on 04/02/2004.

2. The application has been amended as follows:

- a. Cancel claims 2-7, 12-15, 25-29, 33-37 and 43.

Information Disclosure Statement(IDS)

The information disclosure statement (IDS) is submitted on Nov. 19, 2001; January 03 2002; April 22, 2002; and Nov. 04, 2002. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. Please refer to applicants' copy of the 1449 submitted herewith.

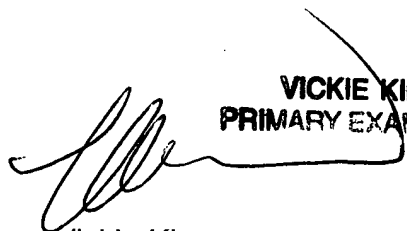
Conclusion

1. All the pending claims 1, 11, 41-42, 44-45 and 49 are allowed.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickie Kim whose telephone number is 571-272-0579. The examiner can normally be reached on Tuesday-Friday.

Art Unit: 1614

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Low be reached on 571-272-0953. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VICKIE KIM
PRIMARY EXAMINER

Vickie Kim
April 6, 2004
Primary Patent examiner
Art 1614



INFORMATION DISCLOSURE CITATION

OMB NO. 0651-0011

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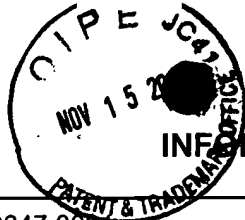
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Applicant	Joseph P. STEINER et al.		
Filing Date	June 5, 2001	Group:	1627

U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
JP	3,810,884	05/14/1974	Gold	260	239	
	3,917,840	11/04/1975	Gold	424	267	
	4,668,798	05/26/1987	Kim	548	533	
	5,002,963	03/26/1991	De Luca et al.	514	419	
	5,128,483	07/07/1992	Trybulski et al.	548	531	
	5,147,877	09/15/1992	Goulet	514	291	
	5,192,773	03/09/1993	Armistead et al.	514	315	
	5,227,467	07/13/1993	Durette et al.	530	321	
	5,235,066	08/10/1993	Askin et al.	548	406	
	5,252,579	10/12/1993	Skotnicki et al.	514	291	
	5,321,009	06/14/1994	Baeder et al.	514	4	
	5,330,993	07/19/1994	Armistead et al.	514	330	
	5,385,908	01/31/1995	Nelson et al.	514	291	
	5,385,918	01/31/1995	Connell et al.	514	330	
	5,444,042	08/22/1995	Bartus et al.	514	2	
	5,447,915	09/05/1995	Schreiber et al.	514	18	
	5,453,437	09/26/1995	Schohe et al.	514	424	
	5,516,797	05/14/1996	Armistead et al.	514	548	
	5,527,907	06/18/1996	Or et al.	540	456	
	5,530,121	06/25/1996	Kao et al.	540	456	
	5,541,189	07/30/1996	Luly et al.	514	291	
	5,541,191	07/30/1996	Skotnicki et al.	514	291	
	5,541,192	07/30/1996	Skotnicki et al.	514	291	
	5,543,423	08/06/1996	Zelle et al.	514	332	
	5,589,499	12/31/1996	Weth	514	423	
	5,599,927	02/04/1997	Or et al.	540	456	
	5,604,294	02/18/1997	Luly et al.	540	456	



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Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
V	5,614,547	03/25/1997	Hamilton et al.	514	423	
	5,620,971	04/15/1997	Armistead et al.	514	212	
	5,621,108	04/15/1997	Smith, III et al.	546	207	
	5,654,332	08/05/1997	Armistead	514	533	
	5,798,355	08/25/1998	Steiner et al.	514	248	
	5,898,029	04/27/1999	Lyons et al.	514	12	
	6,037,370	03/14/2000	Armistead	514	533	

FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
0 048 159 A2	03/24/1982	Europe			
0 088 350 A1	09/14/1983	Europe			
0 405 994 A2	01/02/1991	Europe			
0 378 318 A1	07/18/1990	Europe			
0 564 924 A2	10/13/1993	Europe			
2 247 456 A	03/04/1992	United Kingdom			
DE 40 15 255 A1	11/14/1991	Germany			No, Canadian Counterpart (English)
DE 44 25 950 A1	01/25/1996	Germany			No, English Abstract
WO 88/09789	12/15/1988	WIPO			
WO 91/13088	09/05/1991	WIPO			
WO 92/00278	01/09/1992	WIPO			
WO 92/04370	03/19/1992	WIPO			
WO 92/18478	10/29/1992	WIPO			
WO 92/19593	11/12/1992	WIPO			
WO 92/19745	11/12/1992	WIPO			
WO 92/21313	12/10/1992	WIPO			



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FOREIGN PATENT DOCUMENTS

	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
04	WO 93/07269	04/15/1993	WIPO			
	WO 93/23548	11/25/1993	WIPO			
	WO 93/25546	12/23/1993	WIPO			
	WO 94/07858	04/14/1994	WIPO			
	WO 95/26337	10/05/1995	WIPO			
	WO 96/06097	02/29/1996	WIPO			
	5 024 7/91	11/13/1991	Canada			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

04	Holt et al., "Structure-Activity Studies of Synthetic FKBP Ligands as Peptidyl-prolyl Isomerase Inhibitors", Bioorganic and Medicinal Chemistry Letters, Vol. 4, No. 2, pp. 315-320, 1994.
	Yamashita et al., "Design, Synthesis and Evaluation of Dual Domain FKBP Ligands", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 2, pp. 325-328, 1994.
	Yamamoto et al., "Stimulation of Hair Growth by Topical Application of FK506, a Potent Immunosuppressive Agent", Journal of Investigative Dermatology, Vol. 102, No. 2, pp. 160-164, 1994.
	Wang et al., "Synthesis and FKBP Binding of Small Molecule Mimics of the Tricarbonyl Region on FK506", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 9, pp. 1161-1166, 1994.
	Steffan et al., "Base Catalyzed Degradations of Rapamycin", Tetrahedron Letters, Vol. 34, No. 23, pp. 3699-3702, 1993.
	Steiner et al., "High Brain Densities of the Immunophilin FKBP Colocalized with Calcineurin", Nature, Vol. 358, pp. 584-586, 1992.
	Stocks et al., "Macrocyclic Ring Closures Employing the Intramolecular Heck Reaction", Tetrahedron Letters, Vol. 36, No. 36, pp. 6555-6558, 1995.
	Stocks et al., "The Contribution to Binding of the Pyranoside Substituents in the Excised Binding Domain of FK-506", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 12, pp. 1457-1460, 1994.
	Tanaka et al., "Structure of FK506: A Novel Immunosuppressant Isolated from Streptomyces", J. Am. Chem. Soc., 109, pp. 5031-5033, 1987.
04	Tatlock et al., "High-Affinity FKBP-12 Ligands Derived from (R)-(-)-Carvone. Synthesis and Evaluation of FK506 Pyranose Ring Replacements", Bioorganic & Medicinal Chemistry Letters, Vol. 5, No. 21, pp. 2489-2494, 1995.
	Teague et al., "The Affinity of the Excised Binding Domain of FK-506 for the Immunophilin FKBP12", Bioorganic & Medicinal Chemistry Letters, Vol. 3, No. 10, pp. 1947-1950, 1993.

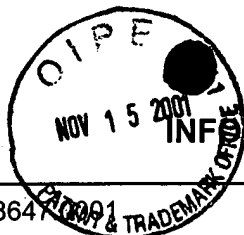


INFORMATION DISCLOSURE CITATION

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Teague et al., "Synthesis of FK506-Cyclosporin Hybrid Macrocycles", Bioorganic & Medicinal Chemistry Letters, Vol. 5, No. 20, pp. 2341-2346, 1995.
	Teague et al., "Synthesis and Study of a Non Macrocyclic FK506 Derivative", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 13, pp. 1581-1584, 1994.
	Tindall, "Immunointervention with Cyclosporin A in Autoimmune Neurological Disorders", Journal of Autoimmunity, Vol. 5 (Supp. A), pp. 301-313, 1992.
	Tugwell, "Cyclosporin in the Treatment of Rheumatoid Arthritis", Journal of Autoimmunity, Vol. 5 (Supp. A), pp. 231, 240, 1992.
	Snyder et al., "Immunophilins and the Nervous System", Nature Medicine, Vol. 1, No. 1, pp. 32-37, 1995.
	Nakatsuka et al., "Total Synthesis of FK506 and an FKBP Probe Reagent, (C ₈ ,C ₉ - ¹³ C ₂)-FK506", J. Am. Chem. Soc., Vol. 112, No. 14, pp. 5583-5601, 1990.
	Nelson et al., "A Novel Ring Contraction of Rapamycin", Tetrahedron Letters, Vol. 35, No. 41, pp. 7557-7560, 1994.
	Nicolaou et al., "Total Synthesis of Rapamycin", J. Am. Chem. Soc., Vol. 115, No. 10, pp. 4419-4420, 1993.
	Nicolaou et al., "Total Synthesis of Rapamycin", Chem. Eur. J., 1, No. 5, pp. 318-333, 1995.
	Pattenden et al., "Facile Synthesis of the "Tricarbonyl" Subunit in the Immunosuppressant Rapamycin", Tetrahedron Letters, Vol. 34, No. 16, pp. 2677-2680, 1993.
	Rao et al., "Studies Directed Towards the Synthesis of Immunosuppressive Agent FK-506: Synthesis of the Entire Bottom-Half", Tetrahedron Letters, Vol. 32, No. 9, pp. 1251-1254, 1991.
	Rao et al., "Studies Directed Towards the Synthesis of Rapamycin: Stereoselective Synthesis of C-1 to C-15 Segment", Tetrahedron Letters, Vol. 34, No. 44, pp. 7111-7114, 1993.
	Rao et al., "Studies Directed Towards the Synthesis of Immunosuppressive Agent FK-506: Construction of the Tricarbonyl Moiety", Tetrahedron Letters, Vol. 31, No. 10, pp. 1439-1442, 1990.
	Schreiber, "Chemistry and Biology of the Immunophilins and Their Immunosuppressive Ligands", Science, Vol. 251, pp. 283-287, 1991.
	Sharkey et al., "Immunophilins Mediate the Neuroprotective Effects of FK506 in Focal Cerebral Ischaemia", Nature, Vol. 371, pp. 336-339, 1994 (Chemical Abstract attached - Vol. 121, No. 19).
	Skotnicki et al., "Ring Expanded Rapamycin Derivatives", Tetrahedron Letters, Vol. 35, No. 2, pp. 201-202, 1994.
	Skotnicki et al., "Synthesis of Secorapamycin Esters and Amides", Tetrahedron Letters, Vol. 35, No. 2, pp. 197-200, 1994.
	Smith, III et al., "Total Synthesis of Rapamycin and Demethoxyrapamycin", J. Am. Chem. Soc., Vol. 117, No. 19, pp. 5407-5408, 1995.



OMB No. 0651-0011

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TECH CENTER 1600/2900

INFORMATION DISCLOSURE CITATION

Atty. Docket No.	086470001	Serial No.	09/873,298
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Jiang et al., "Induction of Anagen in Telogen Mouse Skin by Topical Application of FK506, a Potent Immunosuppressant", Journal of Investigative Dermatology, Vol. 104, No. 4, pp. 523-525, 1995.
	Jones et al., "A Formal Synthesis of FK-506. Exploration of Some Alternatives to Macrolactamization", J. Org. Chem., Vol. 55, No. 9, pp. 2786-2797, 1990.
	Jones et al., "Chemistry of Tricarbonyl Hemiketals and Application of Evans' Technology to the Total Synthesis of the Immunosuppressant (-)-FK-506, J. Am. Chem. Soc., Vol. 112, No. 8, pp. 2998-3017, 1990.
	Kelly et al., "Macrolide Compositions for Treatment of Amyotrophic Lateral Sclerosis", Chemical Abstracts, Vol. 122, 114965m, p. 659, 1995.
	Kino et al., "FK-506, A Novel Immunosuppressant Isolated From a Streptomyces", Journal of Antibiotics, Vol. XL, No. 9, pp. 1249-1255, 1987.
	Kocienski et al., "A Synthesis of the C(1)-C(15) Segment of Tsukubaenolide (FK 506)", Tetrahedron Letters, Vol. 29, No. 35, pp. 4481-4484, 1988.
	Linde II et al., "Straightforward Synthesis of 1,2,3-Tricarbonyl Systems", J. Org. Chem., Vol. 56, No. 7, pp. 2534-2538, 1991.
	Luengo et al., "Efficient Removal of Pipecolinate from Rapamycin and FK506 by Reaction with $n\text{-Bu}_4\text{N}^+\text{CN}^-$ ", Tetrahedron Letters, Vol. 34, No. 29, pp. 4599-4602, 1993.
	Luengo et al., "Synthesis and Structure-Activity Relationships of Macrocyclic FKBP Ligands", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 2, pp. 321-324, 1994.
	Luengo et al., "Studies on the Chemistry of Rapamycin: Novel Transformations under Lewis-Acid Catalysis", Tetrahedron Letters, Vol. 34, No. 6, pp. 991-994, 1993.
	Luengo et al., "Structure-Activity Studies of Rapamycin Analogs: Evidence that the C-7 Methoxy Group is Part of the Effector Domain and Positioned at the FKBP12-FRAP Interface", Chemistry and Biology, Vol. 2, No. 7, pp. 471-481, 1995.
	Lyons et al., "Neuronal Regeneration Enhances the Expression of the Immunophilin FKBP-12", Journal of Neuroscience, pp. 2985-2994, 1995.
	Munegumi et al., "Diastereoselective Catalytic Hydrogenation of N^α Pyruvoyl-(S)-prolinamide", Bull. Chem. Soc. Jpn., Vol. 63, No. 6, pp. 1832-1834, 1990.
	Hayward et al., "An Application of the Suarez Reaction to the Regiospecific and Stereospecific Synthesis of the $\text{C}_{28}\text{-C}_{42}$ Segment of Rapamycin", pp. 3989-3992, 1993.
	Holt et al., "Structure-Activity Studies of Nonmacrocyclic Rapamycin Derivatives", Bioorganic & Medicinal Chemistry Letters, Vol. 3, No. 10, pp. 1977-1980, 1993.
	Holt et al., "Design, Synthesis, and Kinetic Evaluation of High-Affinity FKBP Ligands and the X-ray Crystal Structures of Their Complexes with FKBP12", J. Am. Chem. Soc., Vol. 115, No. 22, pp. 9925-9938, 1993.

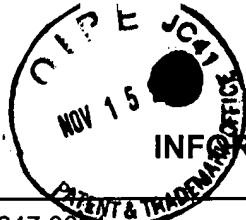


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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

19	Horvath et al., "An Application of the Evans-Prasad 1,3-Syn Diol Synthesis to a Stereospecific Synthesis of the C ₁₀ -C ₂₇ Segment of Rapamycin", Tetrahedron Letters, Vol. 34, No. 25, pp. 3993-3996, 1993.
	Iwabuchi et al., "Effects of Immunosuppressive Peptidyl-Prolyl <i>cis-trans</i> Isomerase (PPIase) Inhibitors, Cyclosporin A, FK506, Ascomycin and Rapamycin, on Hair Growth Initiation in Mouse: Immunosuppression is Not Required for New Hair Growth", Journal of Dermatological Science, 9, pp. 64-69, 1995.
	Hayward et al., "Total Synthesis of Rapamycin via a Novel Titanium-Mediated Aldol Macrocyclization Reaction", J. Am. Chem. Soc., Vol. 115, No. 20, pp. 9345-9346, 1993.
	Goulet et al., "Construction of an FK-506 Analog From Rapamycin-Derived Materials", Tetrahedron Letters, Vol. 32, No. 36, pp. 4627-4630, 1991.
	Goulet et al., "Degradative Studies on the Tricarbonyl Containing Macrolide Rapamycin", Tetrahedron Letters, Vol. 31, No. 34, pp. 4845-4848, 1990.
	Harding et al., "A Receptor for the Immunosuppressant FK506 is a <i>cis-trans</i> Peptidyl-Prolyl Isomerase", Nature, Vol. 341, pp. 758-760, 1989.
	Hauske et al., "Design and Synthesis of Novel FKBP Inhibitors", J. Med. Chem. 1992, Vol. 35, No. 23, pp. 4284-4296, 1992.
	Hauske et al., "Investigation of the Effects of Synthetic, Non-Cytotoxic Immunophilin Inhibitors on MDR", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 17, pp. 2097-2102, 1994.
	Gold et al., "The Immunosuppressant FK506 Increases Functional Recovery and Nerve Regeneration Following Peripheral Nerve Injury", Restorative Neurology and Neuroscience, 6, pp. 287-296, 1994.
	Askin et al., "Chemistry of FK-506: Benzilic Acid Rearrangement of the Tricarbonyl System", Tetrahedron Letters, Vol. 30, No. 6, pp. 671-674, 1989.
	Askin et al., "Efficient Degradation of FK-506 to a Versatile Synthetic Intermediate", J. Org. Chem., Vol. 55, No. 20, pp. 5451-5454, 1990.
	Baumann et al., "Synthesis and Oxidative Cleavage of the Major Equilibrium Products of Ascomycin and FK 506", Tetrahedron Letters, Vol. 36, No. 13, pp. 2231-2234, 1995.
	Bycroft et al., "Efficient Asymmetric Synthesis of α -Amino Acids from α -Keto Acids and Ammonia with Conservation of the Chiral Reagent", J.C.S. Chem. Comm., pp. 988-989, 1975.
	Birkenshaw et al., "Synthetic FKBP12 Ligands. Design and Synthesis of Pyranose Replacements", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 21, pp. 2501-2506, 1994.
	Boulmedais et al., "Stereochemie de la Reduction Electrochimique d' α -cetoamides Optiquement Actives II. Electroreduction de Benzoylformamides Derives de la S(-)-proline", Bulletin de la Societe Chimique de France, 9, No. 2, pp. 185-191, 1988.
19	Caffrey et al., "Synthesis and Evaluation of Dual Domain Macrocyclic FKBP12 Ligands", Bioorganic & Medicinal Chemistry Letters, Vol. 4, No. 21, pp. 2507-2510, 1994.



INFORMATION DISCLOSURE CITATION

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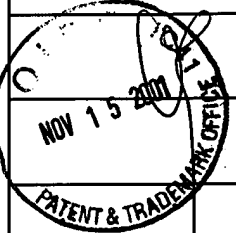
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

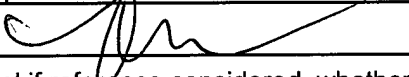
W	Cameron et al., "Immunophilin FK506 Binding Protein Associated with Inositol 1,4,5-trisphosphate Receptor Modulates Calcium Flux", Proc. Natl. Acad. Sci., Vol. 92, pp. 1784-1788, 1995.
	Caufield et al., "Macrocyclic Immunomodulators", Annual Reports in Methonal Chemistry, 25, Chapter 21, pp. 195-204, 1989.
	Chakraborty et al., "Design and Synthesis of a Rapamycin-Based High Affinity Binding FKBP12 Ligand", Chemistry & Biology, Vol. 2, pp. 157-161, 1995.
	Coleman et al., "Degradation and Manipulations of the Immunosuppressant FK506: Preparation of Potential Synthetic Intermediates", Heterocycles, Vol. 28, No. 1, pp. 157-161, 1989.
	Dawson et al., "The Immunophilins, FK506 Binding Protein and Cyclophilin, are Discretely Localized in the Brain: Relationship to Calcineurin", Neuroscience, Vol. 62, No. 2, pp. 569-580, 1994.
	Dawson et al., "Immunosuppressant FK506 Enhances Phosphorylation of Nitric Oxide Synthase and Protects Against Glutamate Neurotoxicity", Proc. Natl. Acad. Sci., Vol. 90, pp. 9808-9812, 1993.
	Dumont et al., "The Immunosuppressive and Toxic Effects of FK-506 are Mechanistically Related: Pharmacology of a Novel Antagonist of FK-506 and Rapamycin", J. Exp. Med., Vol. 176, pp. 751-760, 1992.
	Egbertson et al., "Synthetic Route to the 'Tricarbonyl' Region of FK-506", J. Org. Chem., 54, pp. 11-12, 1989.
	Feutren, "The Optimal Use of Cyclosporin A in Autoimmune Diseases", Journal of Autoimmunity, 5 (Supp. A), pp. 183-195, 1992.
	Finberg et al., "Prevention of HIV-1 Infection and Preservation of CD4 Function by the Binding of CPFs to gp120", Science, Vol. 249, pp. 287-291, 1990.
	Fisher et al., "On the Remarkable Propensity for Carbon-Carbon Bond Cleavage Reactions in the C ₈ -C ₁₀ Region of FK-506", J. Org. Chem. 56, pp. 2900-2907, 1991.
	Fry, "Psoriasis: Immunopathology and Long-Term Treatment with Cyclosporin", Journal of Autoimmunity, 5 (Supp. A), pp. 277-283, 1992.
	Farber, "FKBP12-Ligand-Calcineurin Interactions: Analogues of SBL506", J. Am. Chem. Soc., Vol. 117, No. 27, pp. 7267-7268, 1995.
	Furber et al., "Studies Relating to the Immunosuppressive Activity of FK506", Tetrahedron Letters, Vol. 34, No. 8, pp. 1351-1354, 1993.
	Armistead et al., "Design, Synthesis and Structure of Non-Macrocyclic Inhibitors of FKBP12, the Major Binding Protein for the Immunosuppressant FK506", Acta Cryst., D51, pp. 522-528, 1995.
	Andrus et al., "Structure-Based Design of an Acyclic Ligand That Bridges FKBP12 and Calcineurin", J. Am. Chem. Soc., Vol. 115, No. 22, pp. 10420-10421, 1993.
W	Yohannes et al., "Degradation of Rapamycin: Retrieval of Major Intact-Subunits", Tetrahedron Letters, Vol. 33, No. 49, pp. 7469-7472, 1992.

INFORMATION DISCLOSURE CITATION

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Applicant Joseph P. STEINER et al.	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Yohannes et al., "Degradation of Rapamycin: Synthesis of a Rapamycin Derived Fragment Containing the Tricarbonyl and Triene Sectors", Tetrahedron Letters, Vol. 34, pp. 2075-2078, 1993.
	Williams et al., "Synthesis of the α,β -Diketo Amide Segment of the Novel Immunosuppressive FK506", J. Org. Chem., Vol. 53, No. 19, pp. 4643-4644, 1988.
	Wasserman et al., "Synthesis of the 'Tricarbonyl' Region of FK-506 Through an Amidophosphorane", J. Org. Chem., Vol. 54, No. 12, pp. 2785-2786, 1989.
	Waldmann, "Amino Acid Esters as Chiral Auxiliaries in Barbier-Type Reactions in Aqueous Solution", Liebigs Ann. Chem., pp. 1317-1322, 1991.
	Mashkouskii et al., "1-[4-(2-Hydroxy-3-tert-butylaminopropoxy)-indole-3-yl (5-acetamido-1-(s)-carboxypentyl)-DL-alanyl]-L-proline dihydrochloride, a new angiotensin-converting enzyme inhibitor with β -adrenoblocking properties," Khim.-Farm. Zh., 1993, 27(10), 16-20. (Russian)
	Baader et al., "Inhibition of prolyl 4-hydroxylase by oxalyl amino acid derivatives in vitro, in isolated microsomes and in embryonic chicken tissues," Biochem. J., 300, 525-530, 1994.
	Goodfellow et al., "p-Nitrophenyl 3-Diazopyruvate and Diazopyruvamides, a New Family of Photoactivatable Cross-Linking Bioprobes," Biochemistry, Vol. 28, No. 15, pp. 6346-6360, 1989.
	Soai et al., "Diastereoselective Reduction of Chiral α -Ketoamides Derived from (S)-Proline Esters with Sodium Borohydride. Preparation of Optically Active α -Hydroxy Acids," J. Chem. Soc. Perkin Trans., pp. 769-772, 1985.
Munegumi et al., "Asymmetric Catalytic Hydrogenations of N-Pyruvoyl-(S)-proline Esters," Bull. Chem. Soc. Jpn., 60, pp. 249-253, 1987.	

Examiner 	Date Considered 3/31/04
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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Applicant Joseph P. STEINER et al.	
Filing Date June 5, 2001	Group: 1627

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Teichner et al., "Treatment with Cyclosporine A Promotes Axonal Regeneration in Rats Submitted to Transverse Section of the Spinal Cord," J. Hirnforsch., Vol. 34, No. 3, pp. 343-349, 1993.
Somers et al., "Synthesis and Analysis of 506BD, a High-Affinity Ligand for the Immunophilin FKBP," J. Am. Chem. Soc., Vol. 113, pp. 8045-8056, 1991.
Shiga et al., "Cyclosporin A protects against ischemia-reperfusion injury in the brain," Brain Research, Vol. 595, pp. 145-148, 1992.
Ryba et al., "Cyclosporine A Prevents Neurological Deterioration of Patients with SAH - A Preliminary Report," Acta Neurochir., Vol. 112, pp. 25-27, 1991.
Ocain et al., "A Nonimmunosuppressive Triene-Modified Rapamycin Analog Is A Potent Inhibitor of Peptidyl Prolyl Cis-Trans Isomerase," Biochem. and Biophys. Res. Comm., Vol. 192, No. 3, pp. 1340-1346, 1993.
Williams et al., "Synthesis of the α , β -Diketo Amide Segment of the Novel Immunosuppressive FK506," J. Org. Chem., Vol. 53, pp. 4643-4644, 1988.
Lyons et al., "Immunosuppressant FK506 promotes neurite outgrowth in cultures of PC 12 cells and sensory ganglia," Proc. Natl. Acad. Sci. USA, Vol. 91, pp. 3191-3195, 1994.
Kitamura et al., "Suppressive effect of FK-506, a novel immunosuppressant, against MPTP-induced dopamine depletion in the striatum of young C57BL/6 mice," J. Neuroimmunology, Vol. 50, pp. 221-224, 1994.
Effenberger et al., "Diastereoselective Addition of Benzenesulfonyl Chloride to 1-Acryloylproline Esters," Chem. Ber., Vol. 122, pp. 545-551, 1989.

Examiner

Date Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Patent and Trademark Office - U.S. Department of Commerce

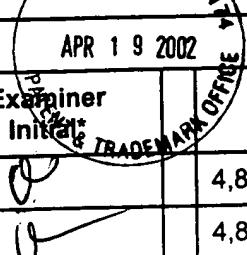
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Atty. Docket No. 08647.0001-00000	Serial No. 09/873,298	APR 23 2002
Applicant Joseph P. STEINER et al.		TECH CENTER 1600/2900
Filing Date June 5, 2001	Group: 1627	

U.S. PATENT DOCUMENTS							
Examiner Initials	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate	
	2,447,587	08/24/1948	Martin et al.	260	561		
	3,312,554	04/04/1967	Wagner et al.	96	114		
	3,370,046	02/20/1968	Wagner et al.	260	78		
	3,396,030	08/06/1968	Haas	96	114		
	3,452,182	06/24/1969	Haas	96	35.1		
	3,713,834	01/30/1973	Fitzgerald	96	114		
	3,833,384	09/03/1974	Noonan et al.	96	115		
	3,879,205	04/22/1975	Fitzgerald et al.	96	114		
	4,105,776	08/08/1978	Ondetti et al.	424	274		
	4,154,840	05/15/1979	Ondetti et al.	424	267		
	4,157,418	06/05/1979	Heilmann	428	355		
	4,172,934	10/30/1979	Heilmann	526	298		
	4,261,895	04/14/1981	Wiskott	260	326.36		
	4,374,829	02/22/1983	Harris et al.	424	177		
	4,401,677	08/30/1983	Greenberg et al.	424	317		
	4,431,644	02/14/1984	Smith et al.	424	246		
	4,439,545	03/27/1984	Aspisi et al.	521	32		
	4,455,366	06/19/1984	Hirano et al.	430	381		
	4,472,380	09/18/1984	Harris et al.	424	177		
	4,474,795	10/02/1984	Greenberg et al.	424	273		
	4,474,799	10/02/1984	Greenberg et al.	424	274		
	4,633,025	12/30/1986	Corey	568	866		
	4,650,785	03/17/1987	Toyoshima et al.	514	3		
	4,668,822	05/26/1987	Corey	562	579		
	4,670,584	06/02/1987	Toyoshima et al.	562	449		
	4,766,110	08/23/1988	Ryan et al.	514	19		
	4,808,573	02/28/1989	Gold et al.	514	19		

INFORMATION DISCLOSURE CITATION

Atty. Docket No. 08647.0001-00000	Serial No. 09/873,298	RECEIVED APR 22 2002 TECH CENTER 1600/2900
Applicant Joseph P. STEINER et al.		
Filing Date June 5, 2001	Group: 1627	

U.S. PATENT DOCUMENTS						
Examiner Initials	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	4,818,749	04/04/1989	Gold et al.	514	19	
	4,898,686	02/06/1990	Johnson et al.	252	389.2	

FOREIGN PATENT DOCUMENTS							
		Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
69		DE 36 36 278 A1	05/05/1988	Germany			No, Abstract
		0 050 800 A1	05/05/1982	Europe			
		0 038 117 A1	10/21/1981	Europe			
		0 182 523 A2	05/28/1986	Europe			
		0 198 352 A2	10/22/1986	Europe			
		1,102,337	06/02/1981	Canada			
		1,103,255	06/16/1981	Canada			
		1,103,256	06/16/1981	Canada			
		DE 2 328 391	01/10/1974	Germany			No, Abstract
		0 093 551 A2	11/09/1983	Europe			
		DE 27 03 828	08/18/1977	Germany			No, Abstract
		63-200060	08/18/1988	Japan			No, Abstract
		57-16809	01/28/1982	Japan			No, Abstract
		CH 240,379	12/15/1945	Switzerland			No
		FR 2 407 204	05/25/1979	France			No, Abstract
		BE 879,158	02/01/1980	Belgium			No
		0 196 841 A1	10/08/1986	Europe			
		DE 35 08 251 A1	09/11/1986	Germany			No, Abstract
		0 309 766 A2	04/05/1989	Europe			
		0 187 547 A2	07/16/1986	Europe			
	2 167 075 A	05/21/1986	Great Britain				
	FR 2 010 601 A	02/20/1970	France			No, Abstract	

INFORMATION DISCLOSURE CITATION

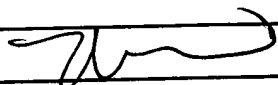
Atty. Docket No. 08647.0001-00000	Serial No. 09/873,298	RECEIVED APR 22 2002 TECH CENTER 1600/2900
Applicant Joseph P. STEINER et al.		
Filing Date June 5, 2001	Group: 1627	

FOREIGN PATENT DOCUMENTS						
Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No	
CN 86 1 01512 A	01/13/1986	China			No, Abstract	
FR 1,533,817	07/19/1968	France			No, Abstract	
DE 2 320 849	11/08/1973	Germany			No, Abstract	
1,103,257	06/16/1981	Canada				
0 198 348 A2	10/22/1986	Europe				
DE 28 45 499 A1	05/03/1979	Germany			No, Abstract	
0 012 401 A1	06/25/1980	Europe				
0 048 159 A2	03/24/1982	Europe				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
W	Häusler et al., "Hydroxycyclodipeptides by Cyclization of Pyrovoyl Amino Acids," Chem. Ber., Vol. 107, pp. 2804-2815, 1974.
	Šunjić et al., "Asymmetric Hydrogenation of α -Arylpropenoic Acids Catalyzed by Rhodium(II) Complexes of Chiral Ligands Derived from Some Monosaccharides," Gazzetta Chimica Italiana, Vol. 119, pp. 229-233, 1989.
	Snatzke et al., "Attempted Diastereoselective Preparation and Chiroptical Properties of (2S)-1-(3-Mercapto-2-Methyl-1-Oxopropyl)-L-Proline (Captopril) and Some Congeners," Croatica Chemica Acta, Vol. 62, No. 2B, pp. 325-337, 1989.
	Nishihara et al., "Conformation and Circular Dichroism of Several N-Acyl-L-prolines," Bulletin of the Chemical Society of Japan, Vol. 48, No. 2, pp. 553-555, 1975.
	Bender et al., "Periodate Oxidation of α -Keto γ -Lactams, Enol Oxidation and β -Lactam Formation. Mechanism of Periodate Hydroxylation Reactions," The Journal of Organic Chemistry, Vol. 43, No. 17, pp. 3354-3362, 1978.
	Steglich et al., "Eine rationelle Synthese von N-Trifluoroacetylaminosäuren," Synthesis, International Journal of Methods in Synthetic Organic Chemistry, No. 6, pp. 399-401, June 1976.
	Tucker et al., "Resolution of the Nonsteroidal Antiandrogen 4'-Cyano-3-[(4-fluorophenyl)sulfonyl]-2-hydroxy-2-methyl-3'-(trifluoromethyl)-propionanilide and the Determination of the Absolute Configuration of the Active Enantiomer," J. Med. Chem., Vol. 31, pp. 885-887, 1988.
	Yoshida et al., "A New Temperature-Sensitive Hydrogel with α -Amino Acid Group as Side Chain of Polymer," Eur. Polym. J., Vol. 25, No. 12, pp. 1197-1202 (1989).
	Corey, "Asymmetric Bromolactonization Reaction: Synthesis of Optically Active 2-Hydroxy-2-Methylalkanoic Acids From 2-Methylenealkanoic Acids," Tetrahedron Lett., Vol. 28, No. 25, pp. 2801-2804, 1987.

Atty. Docket No.	08647.0001-00000	Serial No.	09/873,298	APR 22 2002
Applicant	Joseph P. STEINER et al.		TECH CENTER 1600/2900	
Filing Date	June 5, 2001	Group:	1627	

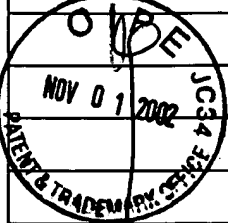
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
APR 19 2002 PATENT & TRADEMARK OFFICE - U.S. DEPARTMENT OF COMMERCE	Dunkerton et al., "Synthetic Approaches to Bicyclomycin I. Preparation of Monocyclic Intermediates by Retrograde Michael Cleavage of 6-Alkyl-6-Methoxyhexahydro-3H-Thiazolo [3,4-a] Pyrazine-5, 8-Diones," Tetrahedron Lett., Vol. 21, pp. 1803-1806, 1980.
	Vasella et al., "Synthesis of D- and L-5-Oxaproline and of a New Captopril Analogue," Helvetica Chimica Acta, Vol. 66, Fasc. 4, Nr. 121, pp. 1241-1252, 1983.
	Waldmann et al., "Thermal Diels-Alder Reactions with N-(2-Alkenoyl)-(S)-proline Esters as Chiral Dienophiles," Liebigs Ann. Chem., pp. 681-685, 1990.
	Effenberger et al., "Diastereoselective Addition of Thio-carboxylic Acids to 1-(Methacryloyl)proline and -proline Derivatives," Chem. Ber., Vol. 122, pp. 553-559, 1989.
	Waldmann, "Amino Acid Esters as Chiral Auxillaries in Lewis Acid Catalyzed Diels-Alder Reactions," Liebigs Ann. Chem., pp. 671-680, 1990.
	Waldmann, "Amino Acid Esters as Chiral Auxillaries in Barbier-Type Reactions in Aqueous Solution," Liebigs Ann. Chem., pp. 1317-1322, 1991.

Examiner		Date Considered	3/31/04
*Examiner:	Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		
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INFORMATION DISCLOSURE CITATION

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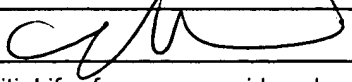
U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	5,696,135	12/09/1997	Steiner	514	317	05/28/1996
	5,795,908	08/18/1998	Hamilton	514	423	01/23/1997
	5,801,197	09/01/1998	Steiner	514	548	05/13/1996
	5,843,960	12/01/1998	Steiner	514	317	01/23/1997
	5,846,981	12/08/1998	Steiner	514	317	01/23/1997
	5,859,031	01/12/1999	Hamilton	514	343	05/21/1996

FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner		Date Considered	7/31/04
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